REMARKS/ARGUMENTS

This is a response to the Office Action dated September 5, 2008. Claims 1 and 3 have been amended. New claims 4-9 have been added. Claims 1-9 are currently pending in the present application.

Claim 1 has been amended to require that each mirror of the micromirror array is capable of tilting individually in at least two different tilt directions to reflect at least two different sets of pixels corresponding to locations of a scene. Basis for this amendment may be found, for example, at page 5, lines 7-15 and Figs. 1(a)-1(b) of the specification as originally filed.

Claim 3 has been amended to recite a method for producing a high resolution image of a scene comprising the steps of; (a) positioning mirrors of a micromirror array to reflect a set of pixels representing locations of a scene; (b) photographing the set of reflected pixels with the photographic imaging system; (c) extracting relevant color values from each reflected pixel; and (d) repeating steps (a)-(c) for a sufficient number of times to provide an image of a desired resolution, wherein each repetition of step (a) reflects a different set of pixels; and (e) assembling the extracted relevant color values into an image of the scene. Basis for this amendment may be found, for example, at page 5, lines 7-15 of the specification as originally filed.

New claim 4 requires a system for correlating the reflected pixels to the corresponding locations of the scene. Similarly, new claim 13 requires correlation of the reflected pixels with a corresponding location of a scene. Basis for this amendment may be found, for example, at page 10, lines 10-17 of the specification as originally filed.

Basis for new claim 5 may be found, for example, at page 8, lines 1-13 of the specification as originally filed. Basis for new claim 6 may be found, for example, at page 8, lines 1-13 of the specification as originally filed. Basis for new claims 7-8 may be found, for example, at page 5, lines 28 of the specification. Basis for new claims 9-10 may be found, for example, at page 6, lines 17-20 of the specification. Basis for new claim 11 may be found at, for example, page 6, lines 27-28 of the specification. Basis for new claims 12 and 19 may be found, for example, at page 7, lines 8-9 and page 9, lines 30-31 of the specification.

Basis for new claim 14 may be found, for example, at page 6, lines 27-31 of the specification. Basis for new claim 15 may be found, for example, at page 7, lines 19-20 of the

specification. Basis for new claim 16 may be found, for example at page 5, lines 31-32 of the specification. Basis for new claim 17 may be found, for example, at page 5, lines 23-25 of the specification. Basis for new claim 18 may be found, for example, at page 8, line 29 to page 9, line 2 of the specification. Basis for new claim 20 may be found, for example, at page 9, lines 21-23 of the specification.

No new matter has been added. Reconsideration and allowance are respectfully requested in view of the following remarks.

1. The Prior Art Rejections

i. Patentability of the Independent Claims

Original claims 1-3 have been rejected pursuant to 35 U.S.C. §102(b) as being anticipated by U.S. Patent no. 5,212,555 (Stoltz). This rejection is respectfully traversed, particularly in view of the present claim amendments. Reconsideration is requested for the reasons which follow.

Stoltz discloses an imaging system that includes a deformable mirror device (DMD) 11 that reflects light from an object and optical sensors 15 for receiving and converting the reflected light to electrical energy. The DMD includes a plurality of mirror elements which may be movable by a torsion beam, cantilever supports or elastomer or membrane designs. Notably, these mirror elements are only capable of rotating about one tilt axis (See Stoltz Fig. 2(a)-2(b)) and assuming only two positions, one position wherein light is directed towards a sensor (the "on" position) and a second position wherein light is directed away from the sensor (the "off" position) (See Stoltz col. 3, lines 45-51, 65-68; col. 4, lines 1-4). In operation, sensor 15 detects light reflected from the mirror elements one pixel at a time in a predetermined sequence until all the pixels of an image frame have been analyzed (See Stoltz col. 4, lines 65-68; col. 5, lines 1-2). To accomplish this, each mirror element reflects only one designated corresponding pixel of an image (See Stoltz col. 4, lines 61-64).

By contrast, Applicant's imaging system includes a micromirror array having a plurality of micromirrors that enable efficient image processing and production of high resolution images. The mirrors are capable of tilting in at least two different axial tilt directions (See Application page 5, lines 7-15; page 6, lines 27-31) and each mirror is also capable of reflecting two or more different pixels of an image (See Application Figs. 1(a)-1(b)). Furthermore Applicant's imaging system is

capable of simultaneously processing multiple pixel reflections from multiple micromirrors to minimize image processing time (See Application page 6, lines 4-8).

With respect to independent claim 1 as amended, Stoltz fails to disclose all the requisite claim elements. Namely, Stoltz fails to disclose:

1. a micromirror capable of tilting in at least two tilt directions; and
2. a micromirror capable of reflecting different locations of a scene to a photographic imaging device.

As discussed above, the mirrors of Applicant's micromirror array are capable of tilting in two different tilt directions (See Application page 5, lines 7-15; page 6, lines 27-31). Specifically, Applicant's mirror is capable of tilting in two different axial directions, i.e. about two different axes. Page 8, lines 1-13 of the application, which incorporates U.S. Patent No. 6,690,885 (Aksyuk) by reference, substantiates the interpretation that tilting in two directions refers to tilting about two different axes (e.g. x and y directions). Aksyuk addresses arrays of two-axis tilt mirrors (See Aksyuk col. 2, lines 45-48). Applicant noted that, "upon reading this disclosure, any micromirror array with mirrors which can be tilted individually in at least two directions can be used." Further, each of the mirrors of the Lucent LambdaRouter array which is described as an exemplary MOEM system of the present invention (See page 8, lines 1-2) tilts about two different axes (See excerpt of Richard D. Gitlin "Next Generation Networks The New Public Network," Columbia Networking Group Seminar (October 4, 2000)), copy enclosed.

Because Stoltz merely discloses a mirror element or pixel element 41 shown in Figs. 2(a) and 2(b) that can only rotate about a single hinge axis (See Stoltz col. 3, lines 56-65), it fails to disclose a micromirror capable of tilting in two axial tilt directions as required by claim 1.

Stoltz further fails to disclose a micromirror capable of reflecting pixels representing different locations of a scene to a photographic imaging device. Rather, each mirror element of Stoltz is designed to reflect only one corresponding designated pixel of an image (See Stoltz col. 4, lines 61-64). The archaic mirror elements of Stoltz's DMD are simple binary structures capable of only two possible positions: an "on position" wherein light is directed towards a sensor to enable processing of the corresponding reflection of a single pixel and an "off position" wherein light is directed away from the sensor (See Stoltz col. 3, lines 45-51, lines 65-68; col. 4, lines 1-4). Because Stoltz's mirror elements are restricted to reflection of a single designated pixel and only

have 2 positional on/off states, they are not capable of reflecting different locations of a scene to a photographic imaging device, as required by claim 1.

Consequently, for the reasons discussed above, Stoltz fails to anticipate claim 1 or any claims that depend therefrom.

Stoltz also fails to disclose all the requisite elements of independent claim 3, as amended. Namely, Stoltz fails to disclose positioning micromirrors at least twice to reflect at least two different sets of pixels representative of a scene to a photographic imaging device (i.e. step (d)), and reflecting a set of pixels representative of locations of a scene.

As discussed above, Stoltz fails to disclose positioning the micromirrors of the array to reflect two different sets of pixels. Rather, each mirror element is designed to reflect only one corresponding designated pixel, and each set of mirrors are only designed to reflect a specific corresponding set of designated pixels (See Stoltz col. 4, lines 61-64). Consequently, the mirrors are incapable of reflecting more than one set of pixels of a scene, as required by amended claim 3.

Claim 3 also requires positioning an array to reflect a set of pixels, i.e. more than one pixel at a time to facilitate and speed-up image processing. Stoltz, by contrast, specifies that the reflected pixel of each mirror element is addressed only one at a time in a predetermined sequence until all the pixels of an image frame have been analyzed (See Stoltz col. 4, lines 65-68; col. 5, lines 1-2). In Stoltz's process, only a single pixel element of the DMD is turned on, i.e. positioned to reflect light to sensor 15, at a time; the remaining pixel elements of the DMD are situated in the "off position" (See Stoltz col. 4, lines 65-68; col. 5, lines 1-2). Stoltz therefore does not meet the limitation of claim 3 requiring positioning an array to reflect a set of pixels of a scene.

All of the remaining claims depend from one of claims 1 and 3 and thus are considered to be patentable for at least the same reasons as claims 1 and 3. Favorable consideration, withdrawal of the rejections and issuance of a Notice of Allowance is requested.

2. Conclusion

Applicant has made an earnest effort to place this application in condition for allowance. If the Examiner feels that a telephone interview would expedite prosecution of this patent application, he is respectfully invited to telephone the undersigned at 215-599-0600.

Respectfully submitted,

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Date: December 5, 2008

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Enclosure: Excerpt of Richard D. Gitlin "Next Generation Networks The New Public Network," Columbia Networking Group Seminar (October 4, 2000)